

ABSTRACT OF DISCLOSURE

A non-volatile memory cell and a high voltage MOS transistor on the same semiconductor chip without changing the characteristic of the non-volatile memory cell. A gate insulating film of a MOS transistor is formed using the steps of forming an oxide film 12 formed on a floating gate 14 of a split-gate type non-volatile memory cell and of forming a tunneling insulating film 16 formed on the floating gate 14 and the oxide film 12. The gate insulating film 13 of the MOS transistor is formed by a stacked layer of the oxide film 12 and tunneling insulating film 16. Thus, the quantity of heat treatment in the entire production process undergoes no change, and the optimized characteristic of the non-volatile memory undergoes no change.